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JAN 14 2002  
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His Gln Val Phe Leu Asp Met Ala Val Leu Val Glu Ser Gln Gly Ala  
225 230 235 240

Gln Leu Asp Asp Ile Glu Ser Gln Val Asn Arg Ala Asn Ser Phe Val  
245 250 255

Arg Gly Gly Ala Gln Gln Leu Gln Val Ala Arg Lys His Gln Lys Asn  
260 265 270

Thr Arg Lys Trp Thr Cys Phe Ala Ile Ile Leu Leu Leu Ile Ile Ile  
275 280 285

Leu Val Val Val Leu Ser Ile Gln Pro Trp Lys Lys  
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<213> Arabidopsis thaliana

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Met Asn Asp Leu Phe Ser Ser Ser Phe Ser Arg Phe  
1 5 10

cgc agc gga gaa cca tcc cct cgc cga gac gtt gcc ggc ggt ggc gac 160  
Arg Ser Gly Glu Pro Ser Pro Arg Arg Asp Val Ala Gly Gly Asp  
15 20 25

gga gtt cag atg gcg aat ccc gcg gga tca acc ggt ggt gtg aac ctc 208  
Gly Val Gln Met Ala Asn Pro Ala Gly Ser Thr Gly Gly Val Asn Leu  
30 35 40

gac aag ttc ttc gaa gat gtt gaa tct gtg aaa gaa gag cta aag gag 256  
Asp Lys Phe Phe Glu Asp Val Glu Ser Val Lys Glu Glu Leu Lys Glu  
45 50 55 60

cta gat cgg ctc aac gaa aca ctc tct tca tgt cac gag cag agc aag 304  
Leu Asp Arg Leu Asn Glu Thr Leu Ser Ser Cys His Glu Gln Ser Lys  
65 70 75

acg ctt cac aat gct aaa gcc gtt aaa gat ctc cgg tct aaa atg gac 352  
Thr Leu His Asn Ala Lys Ala Val Lys Asp Leu Arg Ser Lys Met Asp  
80 85 90

ggt gac gtt gga gtc gcg ttg aag aag gcg aag atg att aaa gtt aaa 400  
Gly Asp Val Gly Val Ala Leu Lys Ala Lys Met Ile Lys Val Lys

95	100	105	
ctc gag gcg cta gat cgt gcc aat gct gct aat cgg agt ctc cct ggc Leu Glu Ala Leu Asp Arg Ala Asn Ala Ala Asn Arg Ser Leu Pro Gly 110	115	120	448
tgt gga cct ggt tct tcc tcc gat cga acc agg acc tct gtc ctc aat Cys Gly Pro Gly Ser Ser Asp Arg Thr Arg Thr Ser Val Leu Asn 125	130	135	496
ggt ctc agg aag aaa ttg atg gac tct atg gat agt ttc aac cga ttg Gly Leu Arg Lys Lys Leu Met Asp Ser Met Asp Ser Phe Asn Arg Leu 145	150	155	544
agg gag ctt atc tcg tcc gag tat aga gaa act gta cag agg agg tac Arg Glu Leu Ile Ser Ser Glu Tyr Arg Glu Thr Val Gln Arg Arg Tyr 160	165	170	592
ttc acc gtc acc ggc gag aat ccg gat gaa cga acc cta gat cga ctg Phe Thr Val Thr Gly Glu Asn Pro Asp Glu Arg Thr Leu Asp Arg Leu 175	180	185	640
att tcc act gga gag agt gag aga ttc ttg cag aaa gca ata caa gaa Ile Ser Thr Gly Glu Ser Glu Arg Phe Leu Gln Lys Ala Ile Gln Glu 190	195	200	688
caa gga aga gga agg gtg tta gac acc att aac gag att caa gaa agg Gln Gly Arg Gly Arg Val Leu Asp Thr Ile Asn Glu Ile Gln Glu Arg 205	210	215	736
cat gat cgc gtt aaa gac att gag aag aat ctc agg gag ctt cac cag His Asp Arg Val Lys Asp Ile Glu Lys Asn Leu Arg Glu Leu His Gln 225	230	235	784
gtg ttt cta gac atg gcc gtg ctg gta gag cac cag gga gct cag ctt Val Phe Leu Asp Met Ala Val Leu Val Glu His Gln Gly Ala Gln Leu 240	245	250	832
gat gac atc gag agt cat gtg ggt cga gct agc tcc ttt atc aga ggc Asp Asp Ile Glu Ser His Val Gly Arg Ala Ser Ser Phe Ile Arg Gly 255	260	265	880
gga act gac cag cta caa acc gct cgg gtt tac cag aag aac acg cga Gly Thr Asp Gln Leu Gln Thr Ala Arg Val Tyr Gln Lys Asn Thr Arg 270	275	280	928
aaa tgg aca tgt att gcc att att att ctc atc atc atc ata act gtt Lys Trp Thr Cys Ile Ala Ile Ile Leu Ile Ile Ile Ile Thr Val 285	290	295	976
gtg gtt ctt gct gtt taaaaaccgt ggaacaacag cagtggcgcc ggcggcggtg Val Val Leu Ala Val 305			1031
gtgggtgggg gggttaccact ggaggaagt aaccaaattc agggacacca ccaaattcctc ctcaggcaag gcgtctattt cggtgaagg gaagttgaag tttagttcg ttatggcat atatattctt tctttgaaaa accttattat caaaccagct ttgtgttact actttctact			1091
			1151
			1211

gctggtttgc	tgttaatctc	ccgtttattt	ggttttgtg	aaagaattta	aatgtgggt	1271
tagatgagaa	aattagtaca	acattctctt	gtatctatgt	ttgctaccct	gacgttagctc	1331
gag						1334

<210> 4  
<211> 305  
<212> PRT  
<213> Arabidopsis thaliana

<400> 4

Met Asn Asp Leu Phe Ser Ser Ser Phe Ser Arg Phe Arg Ser Gly Glu						
1	5	10	15			

Pro Ser Pro Arg Arg Asp Val Ala Gly Gly Gly Asp Gly Val Gln Met						
20	25	30				

Ala Asn Pro Ala Gly Ser Thr Gly Gly Val Asn Leu Asp Lys Phe Phe						
35	40	45				

Glu Asp Val Glu Ser Val Lys Glu Glu Leu Lys Glu Leu Asp Arg Leu						
50	55	60				

Asn Glu Thr Leu Ser Ser Cys His Glu Gln Ser Lys Thr Leu His Asn						
65	70	75	80			

Ala Lys Ala Val Lys Asp Leu Arg Ser Lys Met Asp Gly Asp Val Gly						
85	90	95				

Val Ala Leu Lys Lys Ala Lys Met Ile Lys Val Lys Leu Glu Ala Leu						
100	105	110				

Asp Arg Ala Asn Ala Ala Asn Arg Ser Leu Pro Gly Cys Gly Pro Gly						
115	120	125				

Ser Ser Ser Asp Arg Thr Arg Thr Ser Val Leu Asn Gly Leu Arg Lys						
130	135	140				

Lys Leu Met Asp Ser Met Asp Ser Phe Asn Arg Leu Arg Glu Leu Ile						
145	150	155	160			

Ser Ser Glu Tyr Arg Glu Thr Val Gln Arg Arg Tyr Phe Thr Val Thr						
165	170	175				

Gly Glu Asn Pro Asp Glu Arg Thr Leu Asp Arg Leu Ile Ser Thr Gly  
 180 185 190

Glu Ser Glu Arg Phe Leu Gln Lys Ala Ile Gln Glu Gln Gly Arg Gly  
 195 200 205

Arg Val Leu Asp Thr Ile Asn Glu Ile Gln Glu Arg His Asp Arg Val  
 210 215 220

Lys Asp Ile Glu Lys Asn Leu Arg Glu Leu His Gln Val Phe Leu Asp  
 225 230 235 240

Met Ala Val Leu Val Glu His Gln Gly Ala Gln Leu Asp Asp Ile Glu  
 245 250 255

Ser His Val Gly Arg Ala Ser Ser Phe Ile Arg Gly Gly Thr Asp Gln  
 260 265 270

Leu Gln Thr Ala Arg Val Tyr Gln Lys Asn Thr Arg Lys Trp Thr Cys  
 275 280 285

Ile Ala Ile Ile Ile Leu Ile Ile Ile Ile Thr Val Val Val Leu Ala  
 290 295 300

Val  
 305

<210> 5  
 <211> 1205  
 <212> DNA  
 <213> Nicotiana tabacum

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cgtgtacctg gggtaggtc aaatgagaag gggtaatt ttttttttt ttttaggttt		180
tattgtgttt tattattcgt accgattta ttatttata ttttaaatac ttataagttt		240
tgttaacttcc ccaggtggc ttctggaaac tggtatctgt ttaagagtaa aaaaggtaacc		300
gacttatctt tcttgggtt gttttacta ctattcgct tcttattatc gttttgttca		360
ggtaaaagat cacaagaaga ccacgaagga acggtaacg tcaacgactc gtgggggaga		420
ttgcttcctt aatcggata agtgaaccca gagttatagt agttcaactc gaggaactga		480
aagttggttt tgtcgtaca gttcttatg aactacgtta agaaagttt aggagaggtt		540

aaggaagtgt cgaagtacgg aaagaactta aaggattga cataggtgtt gaacaggaga 600  
 gggAACGAGA acttaacgga aaacgttctt gcagagtcaa actggacatc tataactcaca 660  
 tagttcttga cgaagtagtc ctaaaagagg acactgccat attatagcag caacttgaca 720  
 aagggtata agtctacggt agaaaacgga atcgagcaac ttgactaagt aactgagaac 780  
 ttcaaagaag gaattaggca agtgttgact tcaagagcag gacagtctac ttgaaggccc 840  
 aggtgttaggt ccctccgaag ctaagcgacg taaactagac agattccgaa gctctgctt 900  
 aaactactta aaccgaaaga agttacggta ccttgcagt aataggtaca acctagaatc 960  
 tagaaattgc cgaaatcgca acacttctca gaacgaaaaa agtacccttc taacctcaac 1020  
 ccttatctaa aagagctccg gaaactcaag cagaattac cgaagttgta gaagcttctt 1080  
 aaacagctct aactgaggcg gtcattacag agggtaaaga taccgcactc tcaggctaac 1140  
 tagcagtcga gactttgctc tctttcttagg acttttatct agtaagtaaa actctaccct 1200  
 aaacc 1205

<210> 6  
 <211> 80  
 <212> PRT  
 <213> Nicotiana tabacum

<400> 6

Ser Asn Pro Glu Glu Lys Glu Phe Leu Asp Trp Ser Lys Arg Val Ile  
 1 5 10 . 15

Ile Ile Glu Gly Ile Gly Arg Gly Leu Leu Tyr Leu His Arg Asp Ser  
 20 25 30

Arg Leu Arg Ile Ile His Arg Asp Leu Lys Ala Ser Asn Ile Leu Leu  
 35 40 45

Asp Glu Gln Leu Asn Pro Lys Ile Ser Asp Phe Gly Met Ala Arg Ile  
 50 55 60

Phe Pro Gly Ser Gln Asp Gln Ala Asn Thr Glu Arg Val Val Gly Thr  
 65 70 75 80

<210> 7  
 <211> 77  
 <212> PRT  
 <213> Ipomoea trifida

<400> 7

Asn Lys Gln Arg Ser Ser Leu Leu Asn Trp Gln Thr Arg Phe Asn Ile  
 1 5 10 . 15

Ile Cys Gly Ile Ala Arg Gly Leu Leu Tyr Leu His Gln Asp Ser Arg

20

25

30

Phe Arg Ile Ile His Arg Asp Leu Lys Ala Ser Asn Ile Leu Leu Asp  
 35                   40                   45

Lys Glu Met Asn Pro Lys Ile Ser Asp Phe Gly Met Ala Arg Ile Phe  
 50                   55                   60

Gly Gly Asp Glu Thr Asp Ala Asn Asn Thr Lys Arg Val  
 65                   70                   75

<210> 8  
<211> 72  
<212> PRT  
<213> brassica campestris

<400> 8

Leu Asn Trp Lys Asp Arg Phe Ala Ile Thr Asn Gly Val Ala Arg Gly  
 1                   5                   10                   15

Leu Leu Tyr Leu His Gln Asp Ser Arg Phe Arg Ile Ile His Arg Asp  
 20                   25                   30

Leu Lys Pro Gly Asn Ile Leu Leu Asp Lys Tyr Met Ile Pro Lys Ile  
 35                   40                   45

Ser Asp Phe Gly Met Ala Arg Ile Phe Ala Arg Asp Glu Ile Gln Ala  
 50                   55                   60

Arg Thr Asp Asn Ala Val Gly Thr  
 65                   70

<210> 9  
<211> 72  
<212> PRT  
<213> Brassica oleracea

<400> 9

Lys Lys Arg Ser Ser Asn Leu Asn Trp Lys Asp Arg Phe Ala Ile Ile  
 1                   5                   10                   15

Asn Gly Val Ala Arg Gly Leu Leu Tyr Leu His Gln Asp Ser Arg Phe  
 20                   25                   30

Arg Ile Ile His Arg Asp Met Lys Pro Ser Asn Ile Leu Leu Asp Lys  
 35                   40                   45

Tyr Met Ile Pro Lys Ile Ser Asp Phe Gly Met Ala Arg Ile Phe Ala  
 50                   55                   60

Arg Asp Glu Thr Glu Ala Asn Thr  
 65                   70

<210> 10  
<211> 66  
<212> PRT  
<213> Nicotiana tabacum

<400> 10

Gly Leu Leu Cys Val Gln Glu Tyr Ala Glu Asp Arg Pro Asn Val Ser  
 1 5 10 15

Val Val Leu Ser Met Leu Thr Ser Glu Ile Ser Asp Leu Pro Ser Pro  
 20 25 30

Lys Gln Pro Ala Phe Thr Thr Arg Pro Ser Cys Ser Glu Lys Glu Ser  
 35 40 45

Ser Lys Thr Gln Gly Ser Val Asn Thr Val Ser Ile Thr Ile Met Glu  
 50 55 60

Gly Arg  
 65

<210> 11  
 <211> 70  
 <212> PRT  
 <213> Ipomoea trifida

<400> 11

Gly Leu Leu Cys Val Gln Glu Gln Ala Glu Asp Arg Pro Asn Met Ala  
 1 5 10 15

Thr Val Val Leu Met Leu Gly Ser Glu Ser Ala Thr Leu Pro Gln Pro  
 20 25 30

Lys His Pro Gly Phe Cys Leu Gly Ser Arg Pro Ala Asp Met Asp Ser  
 35 40 45

Ser Thr Ser Asn Cys Asp Glu Ser Cys Thr Val Asn Gln Val Thr Val  
 50 55 60

Thr Met Leu Asp Gly Arg  
 65 70

<210> 12  
 <211> 73  
 <212> PRT  
 <213> brassica campestris

<400> 12

Gly Leu Leu Cys Ile Gln Glu Arg Ala Glu His Arg Pro Thr Met Ser  
 1 5 10 15

Ser Val Val Trp Met Leu Gly Ser Glu Ala Thr Glu Ile Pro Gln Pro  
 20 25 30

Lys Pro Pro Val Tyr Cys Leu Ile Ala Ser Tyr Tyr Ala Asn Asn Pro  
 35 40 45

Ser Ser Ser Arg Gln Phe Asp Asp Asp Glu Ser Trp Thr Val Asp Lys  
 50 55 60

Tyr Thr Trp Ser Val Ile Asp Ala Arg  
65 70

<210> 13  
<211> 73  
<212> PRT  
<213> Brassica oleracea

<400> 13

Gly Leu Leu Cys Ile Gln Glu Arg Ala Glu Asp Arg Pro Thr Met Ser  
1 5 10 15

Ser Val Val Trp Met Leu Gly Ser Glu Ala Thr Asp Ile Pro Gln Pro  
20 25 30

Lys Pro Pro Ile Tyr Cys Leu Ile Thr Ser Tyr Tyr Ala Asn Asn Pro  
35 40 45

Ser Ser Ser Arg Gln Phe Glu Asp Asp Glu Ser Trp Thr Val Asn Lys  
50 55 60

Tyr Thr Cys Ser Val Ile Asp Ala Arg  
65 70

<210> 14  
<211> 124  
<212> PRT  
<213> Nicotiana tabacum

<400> 14

Arg Phe Arg Ala Val Thr Ser Ala Tyr Tyr Arg Ser Ala Val Gly Ala  
1 5 10 15

Leu Leu Val Tyr Asp Ile Ser Arg Lys Thr Thr Phe Glu Asn Ile Gln  
20 25 30

Cys Trp Leu Asp Glu Leu His Thr His Cys Asp Thr Thr Val Ala Arg  
35 40 45

Met Leu Val Gly Asn Lys Cys Asp Leu Glu Asn Ile Arg Asp Val Ser  
50 55 60

Ile Tyr Glu Gly Lys Asn Leu Ala Glu Glu Gly Leu Phe Phe Ile  
65 70 75 80

Glu Thr Ser Ala Leu Asp Ser Thr Asn Val Lys Gln Pro Leu Lys Leu  
85 90 95

Ser Ser Ala Gln Ile Tyr Gln Asn Leu Ser Arg Lys Val Leu His Ser  
100 105 110

Asp Ser Tyr Lys Thr Glu Leu Ser Val His Pro Val  
115 120

<210> 15  
<211> 124  
<212> PRT

<213> Glycine max

<400> 15

Arg Phe Arg Ala Val Thr Ser Ala Tyr Tyr Arg Gly Ala Val Gly Ala  
1 5 10 15

Leu Ile Val Tyr Asp Ile Ser Arg Arg Thr Thr Phe Asp Ser Val Gly  
20 25 30

Arg Trp Leu Asp Glu Leu Lys Thr His Cys Asp Thr Thr Val Ala Met  
35 40 45

Met Leu Val Gly Asn Lys Cys Asp Leu Glu Asn Ile Arg Ala Val Ser  
50 55 60

Ile Asp Glu Gly Lys Ser Leu Ala Glu Ala Glu Gly Leu Phe Phe Met  
65 70 75 80

Glu Thr Ser Ala Leu Asp Ser Thr Asn Val Lys Met Ala Phe Glu Met  
85 90 95

Val Ile Arg Glu Ile Tyr Asn Asn Val Ser Arg Lys Val Leu Asn Ser  
100 105 110

Glu Thr Tyr Lys Ala Glu Leu Ser Val Asn Arg Val  
115 120

<210> 16

<211> 124

<212> PRT

<213> Lotus japonicus

<400> 16

Arg Phe Arg Ala Val Thr Ser Ala Tyr Tyr Arg Gly Ala Val Gly Ala  
1 5 10 15

Leu Ile Val Tyr Asp Ile Thr Arg Arg Thr Thr Phe Asp Ser Val Ser  
20 25 30

Arg Trp Leu Asp Glu Leu Lys Thr His Cys Asp Thr Thr Val Ala Met  
35 40 45

Met Leu Val Gly Asn Lys Cys Asp Leu Glu Asn Ile Arg Ala Val Ser  
50 55 60

Ile Glu Glu Gly Lys Ser Leu Ala Glu Ala Gln Gly Leu Phe Phe Met  
65 70 75 80

Glu Thr Ser Ala Leu Asp Ser Thr Asn Val Arg Thr Ala Phe Glu Met  
85 90 95

Val Ile Arg Glu Ile Tyr Asn Asn Val Ser Arg Lys Val Leu Asn Ser  
100 105 110

Asp Thr Tyr Lys Ala Glu Leu Ser Val Asp Arg Val  
115 120

<210> 17  
 <211> 124  
 <212> PRT  
 <213> Arabidopsis thaliana

<400> 17

Arg	Phe	Arg	Ala	Val	Thr	Ser	Ala	Tyr	Tyr	Arg	Gly	Ala	Val	Gly	Ala
1				5					10				15		

Leu	Val	Val	Tyr	Asp	Ile	Thr	Arg	Arg	Thr	Thr	Phe	Glu	Ser	Val	Gly
			20				25						30		

Arg	Trp	Leu	Asp	Glu	Leu	Lys	Ile	His	Ser	Asp	Thr	Thr	Val	Ala	Arg
	35					40						45			

Met	Leu	Val	Gly	Asn	Lys	Cys	Asp	Leu	Glu	Asn	Ile	Arg	Ala	Val	Ser
	50				55					60					

Val	Glu	Glu	Gly	Lys	Ala	Leu	Ala	Glu	Glu	Gly	Leu	Phe	Phe	Val	
65				70				75				80			

Glu	Thr	Ser	Ala	Leu	Asp	Ser	Thr	Asn	Val	Lys	Thr	Ala	Phe	Glu	Met
	85						90					95			

Val	Ile	Leu	Asp	Ile	Tyr	Asn	Asn	Val	Ser	Arg	Lys	Gln	Leu	Asn	Ser
	100						105					110			

Asp	Thr	Tyr	Lys	Asp	Glu	Leu	Thr	Val	Asn	Arg	Val			
	115					120								

<210> 18  
 <211> 124  
 <212> PRT  
 <213> Arabidopsis thaliana

<400> 18

Arg	Phe	Arg	Ala	Val	Thr	Ser	Ala	Tyr	Tyr	Arg	Gly	Ala	Val	Gly	Ala
1				5					10			15			

Leu	Val	Val	Tyr	Asp	Ile	Thr	Arg	Ser	Ser	Thr	Phe	Glu	Asn	Val	Gly
			20				25					30			

Arg	Trp	Leu	Asp	Glu	Leu	Asn	Thr	His	Ser	Asp	Thr	Thr	Val	Ala	Lys
	35					40					45				

Met	Leu	Ile	Gly	Asn	Lys	Cys	Asp	Leu	Glu	Ser	Ile	Arg	Ala	Val	Ser
	50				55					60					

Val	Glu	Glu	Gly	Lys	Ser	Leu	Ala	Glu	Ser	Glu	Gly	Leu	Phe	Phe	Met
65				70				75				80			

Glu	Thr	Ser	Ala	Leu	Asp	Ser	Thr	Asn	Val	Lys	Thr	Ala	Phe	Glu	Met
	85						90					95			

Val	Ile	Arg	Glu	Ile	Tyr	Ser	Asn	Ile	Ser	Arg	Lys	Gln	Leu	Asn	Ser
	100						105					110			

Asp Ser Tyr Lys Glu Glu Leu Thr Val Asn Arg Val  
       115                  120

<210> 19  
 <211> 124  
 <212> PRT  
 <213> Nicotiana tabacum

<400> 19

Arg Phe Arg Ala Val Thr Ser Ala Tyr Tyr Arg Gly Ala Phe Gly Ala  
   1                      5                  10                  15

Leu Val Val Tyr Asp Ile Thr Arg Arg Thr Thr Phe Asp Ser Ile Pro  
   20                    25                  30

Arg Trp Leu Asp Glu Leu Lys Thr His Ser Asp Thr Thr Val Ala Arg  
   35                    40                  45

Met Leu Val Gly Asn Lys Cys Asp Leu Asp Asn Ile Arg Ala Val Ser  
   50                    55                  60

Val Glu Glu Gly Lys Ser Leu Ala Glu Ser Glu Gly Met Phe Phe Met  
   65                    70                  75                  80

Glu Thr Ser Ala Leu Asp Ala Thr Asn Val Asn Lys Ala Phe Asp Met  
   85                    90                  95

Val Ile Arg Glu Ile Tyr Asn Ser Val Ser Arg Lys Val Leu Asn Ser  
   100                  105                  110

Asp Ser Tyr Lys Ala Glu Leu Ser Val Asn Arg Val  
       115                  120

<210> 20  
 <211> 168  
 <212> PRT  
 <213> Nicotiana tabacum

<400> 20

Leu Ile Phe Ser Leu Glu Thr Phe Leu Leu Val Leu Phe Phe Thr  
   1                    5                  10                  15

Leu Val Ser Ser Ser Ala Ser Glu Ile Phe Phe Glu Glu Ser Phe Asp  
   20                    25                  30

Asp Gly Trp Arg Ser Arg Trp Val Lys Ser Asp Trp Lys Ile Ser Glu  
   35                    40                  45

Gly Lys Ala Gly Ser Phe Lys His Thr Ala Gly Thr Trp Ala Gly Asp  
   50                    55                  60

Pro Asp Asp Lys Gly Ile His Thr Thr Asn Asp Ala Lys His Phe Ala  
   65                    70                  75                  80

Val Ser Ala Lys Ile Pro Glu Phe Ser Asn Lys Asn Arg Thr Leu Val  
   85                    90                  95

Val Gln Tyr Ser Ile Lys Phe Glu Pro Asp Ile Glu Cys Gly Arg Gly  
 100 105 110

Tyr Ile Lys Leu Leu Ser Gly Tyr Val His Pro Lys Lys Phe Gly Gly  
 115 120 125

Asp Thr Pro Tyr Ser Phe Met Phe Gly Ala Asp Ile Cys Gly Ser Gln  
 130 135 140

Thr Lys Lys Pro Ser Cys Leu Tyr Phe Pro Tyr Pro Gly Ala Glu Leu  
 145 150 155 160

Pro Pro Leu Pro Glu Arg Asn Leu  
 165

<210> 21  
 <211> 165  
 <212> PRT  
 <213> Arabidopsis thaliana

<400> 21

Asn Lys Leu Ser Phe Phe Cys Phe Phe Phe Leu Val Ser Val Leu Thr  
 1 5 10 15

Leu Ala Pro Leu Ala Phe Ser Glu Ile Phe Leu Glu Glu His Phe Glu  
 20 25 30

Gly Gly Trp Lys Ser Arg Trp Val Leu Ser Asp Trp Lys Arg Asn Glu  
 35 40 45

Gly Lys Ala Gly Thr Phe Lys His Thr Ala Gly Lys Trp Pro Gly Asp  
 50 55 60

Pro Asp Asn Lys Gly Ile Gln Thr Tyr Asn Asp Ala Lys His Tyr Ala  
 65 70 75 80

Ile Ser Ala Lys Ile Pro Glu Phe Ser Asn Lys Asn Arg Thr Leu Val  
 85 90 95

Val Gln Tyr Ser Val Lys Ile Glu Gln Asp Ile Glu Cys Gly Gly Ala  
 100 105 110

Tyr Ile Lys Leu Leu Ser Gly Tyr Val Asn Gln Lys Gln Phe Gly Gly  
 115 120 125

Asp Thr Pro Tyr Ser Leu Met Phe Gly Pro Asp Ile Cys Gly Thr Gln  
 130 135 140

Thr Lys Lys Leu His Val Ile Val Ser Tyr Gln Gly Gln Asn Tyr Pro  
 145 150 155 160

Ile Lys Lys Asp Leu  
 165

<210> 22  
 <211> 82  
 <212> PRT  
 <213> Nicotiana tabacum

<400> 22

Gly Val Trp Met Glu Pro Asp Tyr Ala Lys Thr Ser Asp Ser Arg Lys  
 1 5 10 15

Cys Leu Pro Ile Gly Glu Ala Glu Lys Glu Ala Phe Glu Glu Ala Glu  
 20 25 30

Lys Val Arg Lys Ala Lys Glu Glu Glu Ala Gln Arg Ala Arg Glu  
 35 40 45

Glu Gly Glu Arg Arg Lys Arg Glu Arg Gly Arg Asp Arg His Arg Asp  
 50 55 60

Arg Tyr Lys Lys Arg Tyr His His Asp Tyr Met Asp Asp Tyr His Asp  
 65 70 75 80

Glu Leu

<210> 23

<211> 85

<212> PRT

<213> Arabidopsis thaliana

<400> 23

Ile Leu Ile Cys Asp Asp Pro Ala Tyr Ala Arg Ser Ile Val Asp Asp  
 1 5 10 15

Tyr Phe Ala Gln His Arg Glu Ser Glu Lys Glu Leu Phe Ala Glu Ala  
 20 25 30

Glu Lys Glu Arg Lys Ala Arg Glu Asp Glu Glu Ala Arg Ile Ala Arg  
 35 40 45

Glu Glu Gly Glu Arg Arg Lys Glu Arg Asp His Arg Tyr Gly Asp  
 50 55 60

Arg Arg Arg Arg Tyr Lys Arg Pro Asn Pro Arg Asp Tyr Met Asp Asp  
 65 70 75 80

Tyr His Asp Glu Leu  
 85

<210> 24

<211> 310

<212> PRT

<213> Arabidopsis thaliana

<400> 24

Met Asn Asp Leu Met Thr Lys Ser Phe Met Ser Tyr Val Asp Leu Lys  
 1 5 10 15

Lys Ala Ala Met Lys Asp Met Glu Ala Gly Pro Asp Phe Asp Leu Glu  
 20 25 30

Met Ala Ser Thr Lys Ala Asp Lys Met Asp Glu Asn Leu Ser Ser Phe  
                   35                  40                  45  
 Leu Glu Glu Ala Glu Tyr Val Lys Ala Glu Met Gly Leu Ile Ser Glu  
                   50                  55                  60  
 Thr Leu Ala Arg Ile Glu Gln Tyr His Glu Glu Ser Lys Gly Val His  
        65                  70                  75                  80  
 Lys Ala Glu Ser Val Lys Ser Leu Arg Asn Lys Ile Ser Asn Glu Ile  
        85                  90                  95  
 Val Ser Gly Leu Arg Lys Ala Lys Ser Ile Lys Ser Lys Leu Glu Glu  
        100                  105                  110  
 Met Asp Lys Ala Asn Lys Glu Ile Lys Arg Leu Ser Gly Thr Pro Val  
        115                  120                  125  
 Tyr Arg Ser Arg Thr Ala Val Thr Asn Gly Leu Arg Lys Lys Leu Lys  
        130                  135                  140  
 Glu Val Met Met Glu Phe Gln Gly Leu Arg Gln Lys Met Met Ser Glu  
        145                  150                  155                  160  
 Tyr Lys Glu Thr Val Glu Arg Arg Tyr Phe Thr Val Thr Gly Glu His  
        165                  170                  175  
 Ala Asn Asp Glu Met Ile Glu Lys Ile Ile Thr Asp Asn Ala Gly Gly  
        180                  185                  190  
 Glu Glu Phe Leu Thr Arg Ala Ile Gln Glu His Gly Lys Gly Lys Val  
        195                  200                  205  
 Leu Glu Thr Val Val Glu Ile Gln Asp Arg Tyr Asp Ala Ala Lys Glu  
        210                  215                  220  
 Ile Glu Lys Ser Leu Leu Glu Leu His Gln Val Phe Leu Asp Met Ala  
        225                  230                  235                  240  
 Val Met Val Glu Ser Gln Gly Glu Gln Met Asp Glu Ile Glu His His  
        245                  250                  255  
 Val Ile Asn Ala Ser His Tyr Val Ala Asp Gly Ala Asn Glu Leu Lys  
        260                  265                  270  
 Thr Ala Lys Ser His Gln Arg Asn Ser Arg Lys Trp Met Cys Ile Gly  
        275                  280                  285  
 Ile Ile Val Leu Leu Ile Ile Leu Ile Val Val Ile Pro Ile Ile  
        290                  295                  300  
 Thr Ser Phe Ser Ser Ser  
        305                  310  
 <210> 25  
 <211> 259  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 25

Met Asp Glu Phe Phe Glu Gln Val Glu Glu Ile Arg Gly Phe Ile Asp  
 1 5 10 15

Lys Ile Ala Glu Asn Val Glu Glu Val Lys Arg Lys His Ser Ala Ile  
 20 25 30

Leu Ala Ser Pro Asn Pro Asp Glu Lys Thr Lys Val Glu Leu Glu Glu  
 35 40 45

Leu Met Ser Asp Ile Lys Lys Thr Ala Asn Lys Val Arg Ser Lys Leu  
 50 55 60

Lys Ser Ile Glu Gln Ser Ile Glu Gln Glu Glu Gly Leu Asn Arg Ser  
 65 70 75 80

Ser Ala Asp Leu Arg Ile Arg Lys Thr Gln His Ser Thr Leu Ser Arg  
 85 90 95

Lys Phe Val Glu Val Met Ser Glu Tyr Asn Ala Thr Gln Ser Val Tyr  
 100 105 110

Arg Glu Arg Cys Lys Gly Arg Ile Gln Arg Gln Leu Glu Ile Thr Gly  
 115 120 125

Arg Thr Thr Thr Ser Glu Glu Leu Glu Asp Met Leu Glu Ser Gly Asn  
 130 135 140

Pro Ala Ile Phe Ala Ser Gly Ile Ile Met Asp Ser Ser Ile Ser Lys  
 145 150 155 160

Gln Ala Leu Ser Glu Ile Glu Thr Arg His Ser Glu Ile Ile Lys Leu  
 165 170 175

Glu Asn Ser Ile Arg Glu Leu His Asp Met Phe Met Asp Met Ala Met  
 180 185 190

Leu Val Glu Ser Gln Gly Glu Met Ile Asp Arg Ile Glu Tyr Asn Val  
 195 200 205

Glu His Ala Val Asp Tyr Val Glu Arg Ala Val Ser Asp Thr Lys Lys  
 210 215 220

Ala Val Lys Tyr Gln Ser Lys Ala Arg Arg Lys Lys Ile Met Ile Ile  
 225 230 235 240

Ile Cys Cys Val Ile Leu Gly Ile Val Ile Ala Ser Thr Val Gly Gly  
 245 250 255

Ile Phe Ala

<210> 26

<211> 288

<212> PRT

<213> Homo sapiens

<400> 26

Met Lys Asp Arg Thr Gln Val Leu Arg Thr Arg Arg Asn Ser Asp Asp  
 1 5 10 15  
 Lys Glu Glu Val Val His Val Asp Arg Asp His Phe Met Asp Glu Phe  
 20 25 30  
 Phe Glu Gln Glu Glu Ile Arg Gly Cys Ile Glu Lys Leu Ser Glu  
 35 40 45  
 Asp Val Glu Gln Val Lys Gln His Ser Ala Ile Leu Ala Ala Pro  
 50 55 60  
 Asn Pro Asp Glu Arg Thr Lys Gln Glu Leu Glu Asp Leu Thr Ala Asp  
 65 70 75 80  
 Ile Lys Lys Thr Ala Asn Lys Val Arg Ser Lys Leu Lys Ala Ile Glu  
 85 90 95  
 Gln Ser Ile Glu Gln Glu Gly Ser Thr Ala Pro Arg Pro Ile Leu  
 100 105 110  
 Arg Ile Arg Lys Thr Gln His Ser Thr Leu Ser Arg Lys Phe Val Glu  
 115 120 125  
 Val Met Thr Glu Tyr Asn Ala Thr Gln Ser Lys Tyr Arg Asp Arg Cys  
 130 135 140  
 Lys Asp Arg Ile Gln Arg Gln Leu Glu Ile Thr Gly Arg Thr Thr Thr  
 145 150 155 160  
 Asn Glu Glu Leu Glu Asp Met Leu Glu Ser Gly Lys Leu Pro Ile Phe  
 165 170 175  
 Thr Asp Asp Ile Lys Met Asp Ser Gln Met Thr Lys Gln Ala Leu Asn  
 180 185 190  
 Glu Ile Glu Thr Arg His Asn Glu Ile Ile Lys Leu Glu Thr Ser Ile  
 195 200 205  
 Arg Glu Leu His Asp Met Phe Val Asp Met Ala Met Leu Val Glu Ser  
 210 215 220  
 Gln Gly Glu Met Ile Asp Arg Ile Glu Tyr Asn Val Glu His Ser Val  
 225 230 235 240  
 Asp Tyr Val Glu Arg Ala Val Ser Asp Thr Lys Lys Ala Val Lys Tyr  
 245 250 255  
 Gln Ser Lys Ala Arg Arg Lys Lys Ile Ile Ile Ile Cys Cys Val  
 260 265 270  
 Val Leu Gly Val Val Leu Ala Ser Ser Ile Gly Cys Thr Leu Gly Leu  
 275 280 285  
 <210> 27  
 <211> 291  
 <212> PRT  
 <213> Drosophila melanogaster

&lt;400&gt; 27

Met Thr Lys Asp Arg Leu Ala Ala Leu His Ala Ala Gln Ser Asp Asp  
 1 5 10 15

Glu Glu Glu Thr Glu Val Ala Val Asn Val Asp Gly His Asp Ser Tyr  
 20 25 30

Met Asp Asp Phe Phe Ala Gln Val Glu Glu Ile Arg Gly Met Ile Asp  
 35 40 45

Lys Val Gln Asp Asn Val Glu Glu Val Lys Lys Lys His Ser Ala Ile  
 50 55 60

Leu Ser Ala Pro Gln Thr Asp Glu Lys Thr Lys Gln Glu Leu Glu Asp  
 65 70 75 80

Leu Met Ala Asp Ile Lys Lys Asn Ala Asn Arg Val Arg Gly Lys Leu  
 85 90 95

Lys Gly Ile Glu Gln Asn Ile Glu Gln Glu Glu Gln Gln Asn Lys Ser  
 100 105 110

Ser Ala Asp Leu Arg Ile Arg Lys Thr Gln His Ser Thr Leu Ser Arg  
 115 120 125

Lys Phe Val Glu Val Met Thr Glu Tyr Asn Arg Thr Gln Thr Asp Tyr  
 130 135 140

Arg Glu Arg Cys Lys Gly Arg Ile Gln Arg Gln Leu Glu Ile Thr Gly  
 145 150 155 160

Arg Pro Thr Asn Asp Asp Glu Leu Glu Lys Met Leu Glu Glu Gly Asn  
 165 170 175

Ser Ser Val Phe Thr Gln Gly Ile Ile Met Glu Thr Gln Gln Ala Lys  
 180 185 190

Gln Thr Leu Ala Asp Ile Glu Ala Arg His Gln Asp Ile Met Lys Leu  
 195 200 205

Glu Thr Ser Ile Lys Glu Leu His Asp Met Phe Met Asp Met Ala Met  
 210 215 220

Leu Val Glu Ser Gln Gly Glu Met Ile Asp Arg Ile Glu Tyr His Val  
 225 230 235 240

Glu His Ala Met Asp Tyr Val Gln Thr Ala Thr Gln Asp Thr Lys Lys  
 245 250 255

Ala Leu Lys Tyr Gln Ser Lys Ala Arg Arg Lys Lys Ile Met Ile Leu  
 260 265 270

Ile Cys Leu Thr Val Leu Gly Ile Leu Ala Ala Ser Tyr Val Ser Ser  
 275 280 285

Tyr Phe Met  
 290

<210> 28  
<211> 6  
<212> PRT  
<213> Nicotiana tabacum

<400> 28

Leu Gln Val Ala Arg Lys  
1 5

<210> 29  
<211> 6  
<212> PRT  
<213> Drosophila melanogaster

<400> 29

Thr Lys Lys Ala Leu Lys  
1 5

<210> 30  
<211> 6  
<212> PRT  
<213> Rattus sp.

<400> 30

Thr Lys Lys Ala Val Lys  
1 5

<210> 31  
<211> 6  
<212> PRT  
<213> yeast sp.

<400> 31

Thr Asp Lys Ala Val Lys  
1 5

<210> 32  
<211> 6  
<212> PRT  
<213> yeast sp.

<400> 32

Thr Asn Lys Ala Val Lys  
1 5

<210> 33  
<211> 13  
<212> PRT  
<213> Nicotiana tabacum

<400> 33

Asp Gln Ser Asp Ser His Ala Ile Glu Met Gly Asp Ile

1 5 10

<210> 34  
<211> 5  
<212> PRT  
<213> Nicotiana tabacum

<400> 34

Gly Cys Gly Pro Gly  
1 5

<210> 35  
<211> 25  
<212> PRT  
<213> Nicotiana tabacum

<400> 35

Leu Glu Arg Asn Leu Lys Glu Leu His Gln Val Phe Leu Asp Met Ala  
1 5 10 15

Val Leu Val Glu Ser Gln Gly Ala Gln  
20 25

<210> 36  
<211> 25  
<212> PRT  
<213> Arabidopsis thaliana

<400> 36

Ile Glu Lys Ser Leu Leu Glu Leu His Gln Val Phe Leu Asp Met Ala  
1 5 10 15

Val Met Val Glu Ser Gln Gly Glu Gln  
20 25

<210> 37  
<211> 25  
<212> PRT  
<213> Homo sapiens

<400> 37

Leu Glu Asn Ser Ile Arg Glu Leu His Asp Met Phe Met Asp Met Ala  
1 5 10 15

Met Leu Val Glu Ser Gln Gly Glu Met  
20 25

<210> 38  
<211> 20  
<212> PRT  
<213> Nicotiana tabacum

<400> 38

Ile Ile Leu Leu Leu Ile Ile Leu Val Val Val Leu Ser Ile Gln

1	5	10	15
Pro Trp Lys Lys			
20			
<210> 39			
<211> 22			
<212> PRT			
<213> Arabidopsis thaliana			
<400> 39			
Ile Ile Val Leu Leu Ile Ile Leu Ile Val Val Ile Pro Ile Ile			
1 5 10 15			
Thr Ser Phe Ser Ser Ser			
20			
<210> 40			
<211> 21			
<212> PRT			
<213> Homo sapiens			
<400> 40			
Ile Ile Ile Cys Cys Val Ile Leu Gly Ile Val Ile Ala Ser Thr Val			
1 5 10 15			
Gly Gly Ile Phe Ala			
20			
<210> 41			
<211> 20			
<212> DNA			
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<220>			
<221> misc_feature			
<222> (1)..(20)			
<223> primer			
<400> 41			
taatacgaact cactataggg			20
<210> 42			
<211> 17			
<212> DNA			
<213> Artificial sequence			
<220>			
<221> misc_feature			
<222> (1)..(17)			
<223> primer			
<400> 42			
gtaaaaacgac ggccagt			17

<210> 43  
<211> 19  
<212> DNA  
<213> Artificial sequence

<220>  
<221> misc\_feature  
<222> (1)..(19)  
<223> primer

<400> 43  
ggaaacagct atgaccatg

19

<210> 44  
<211> 13  
<212> PRT  
<213> keyhole limpet haemocyanin

<400> 44

Cys Gly Pro Gly Ser Ser Ser Asp Arg Thr Arg Thr Ser  
1 5 10